female athletes will rarely bring up issues regarding diet or menstrual history, pertinent questions must be asked. It is often difficult to get an adequate history involving these sensitive issues simply by having an athlete answer a questionnaire. If possible, having a station where the athlete talks with a trainer, psychologist, or physician for a few minutes will elicit a more revealing history.

In addition, checking for subtle physical signs may identify an athlete who already has a disordered eating pattern. These athletes are not necessarily abnormally thin. They may have a decreased pulse rate of 40 to 50 beats per minute. Hypotension, hypothermia, lanugo hair, or a history of fainting can be clues to metabolic disturbances. Parotid swelling (chipmunk cheeks), erosion of tooth enamel or a large amount of dental work, and Russell's sign—finger and nail changes on the first and second digits of the dominant hand—are all signs of bulimia.

Rarely is an athlete excluded from participation for disordered eating or amenorrhea. Yet, these carry substantial possible consequences in psychiatric, endocrine, and skeletal well-being. If, as with other problems identified on an examination, athletes at risk for the triad are denied participation until further evaluation and treatment are initiated, the prognosis for recovery will be improved. It is important for physicians to encourage women to participate in sports in a healthy manner and to help eliminate the "win-at-all-costs" mentality.

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Diagnosing Tibial Stress Injuries in Athletes

AS MANY AS 10% of all injuries seen in sports medicine clinics are stress fractures. Running is the most common activity causing these injuries, and the tibia is the most frequent site of injury. The term stress fracture is, however, not appropriate for most tibial stress injuries. Most of the injuries traditionally classified as stress fractures show no evidence of a fracture line or break in the continuity of bone, but exhibit various degrees of bone remodeling and stress reaction.

Radiographs are not a sensitive indicator for bony stress injuries. Magnetic resonance imaging (MRI) has been found superior to isotope bone scanning for diagnosing the degree of tibial stress injuries in running athletes. Magnetic resonance imaging with the fat-suppression technique can clearly identify four grades of tibial bony stress injury: periosteal inflammation associated with the shin splint syndrome, followed by progressive marrow edema, first on fat-suppressed T2-weighted images, then T1-weighted images, and ultimately a cortical stress fracture. Additional advantages of the use of MRI include its multiplanar capability, resulting in precise anatomic localization, lack of radiation exposure, and substantially less imaging time than triple-phase bone scan, although it is currently more costly.

Magnetic resonance imaging is recommended for grading tibial stress injuries in runners and other athletes to allow more accurate recommendations for rehabilitation and a return to impact activity. Athletes with a grade 1 stress injury can usually return to running on grass or soft dirt within three weeks and those with a grade 2 injury within six weeks. Those with grade 3 and 4 injuries are typically more symptomatic, with most having pain with daily ambulation. On physical examination, they have focal bone tenderness and increased pain with percussion, either directly over the involved bone or, in severe cases, at a distance from the site of pain. Athletes with a grade 3 injury are often unable to return to impact activity for 9 weeks and those with a grade 4 injury for at least 12 weeks.

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Alcohol Use and Traumatic Brain Injury

TRAUMATIC BRAIN INJURY and alcohol abuse are overlapping conditions that interact on several levels. Alcohol abuse, before and after injury, and the presence of alcohol in the blood ("positive blood alcohol level") at the time of the brain injury can complicate recovery. For these reasons it is important to screen for alcohol-related problems in patients with brain injuries and to use various motivational techniques described here to encourage survivors to abstain from alcohol for at least a year after injury.

Preexisting alcohol abuse is common among persons with traumatic brain injury, with as many as 58% reporting a history of alcohol abuse or dependence and 25% reporting previous treatment for substance abuse. Alcohol consumption data also suggest that persons with traumatic brain injury are more likely than their peers to have been heavy drinkers. Alcohol use is involved in many traumatic accidents, including those resulting in brain injury. One study showed that 46% of 2,657 trauma patients had a positive blood alcohol level at admission, 36% were